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ABSTRACT

This paper examined 39 longitudinal studies of Head Start children and families, of which 17 reported parent outcomes. Convergent patterns of parent outcomes as well as the research methods used to investigate those outcomes, were analyzed. In-depth analysis of the studies with the strongest research design (for type of study) disclosed that Head Start parents in these studies consistently showed improved abilities to promote their children's educational success. These studies involved more than 2,500 families in different parts of the country, at different points in Head Start's 32 year history. The review strongly suggests that Head Start systematically helps parents achieve positive outcomes and concludes that more research is needed to fully understand the breadth and depth of Head Start's impact on parents. (Two appendices list the individuals asked to suggest studies for review, and the methods used to identify studies. Contains 79 references.) (Author/EV)

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DOES HEAD START HELP PARENTS? A CRITICAL REVIEW OF LONGITUDINAL STUDIES OF HEAD START CHILDREN AND FAMILIES

by

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ABSTRACT

This paper is based on a review of 39 longitudinal studies of Head Start children and families, of which 17 reported parent outcomes. Convergent patterns of parent outcomes as well as the research methods used to investigate those outcomes, were analyzed. In-depth analysis of the studies with the strongest research design (for type of study) disclosed that Head Start parents in these studies consistently showed improved abilities to promote their children's educational success. These studies involved in total more than 2,500 families in different parts of the country, at different points in Head Start's 32-year history. This review strongly suggests that Head Start systematically helps parents achieve positive outcomes. More research is needed to fully understand the breadth and depth of Head Start's impact on parents.

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In addition, I would like to thank Michael Levine of the Carnegie Corporation of New York, as well as Barbara Finberg, former Vice-President of Carnegie. The support of the Carnegie Corporation of New York, as well as that of a private foundation who wishes to remain anonymous, enabled me to carry out this review. The ideas and opinions expressed herein, however, are solely my own responsibility.

DOES HEAD START HELP PARENTS? A CRITICAL REVIEW OF LONGITUDINAL STUDIES OF HEAD START CHILDREN AND FAMILIES

Overview

From a very young child's perspective, what matters most in life are *parents*.[1] Very young children know that their well-being depends on the nature of the parent-child relationship. Head Start expansion - and particularly expansion of Early Head Start - should be designed to enhance the parent-child relationship.

Before we can outline well the elements of Head Start expansion that would deeply enhance parent-child relationships, we need to know more about Head Start's influence on parents. What happens to parents who participate in Head Start? The very large volume of existing Head Start research offers one place to start in the search for answers to this question.

This review is intended to answer the following research question: what do existing longitudinal studies of Head Start children and/or families tell us about the impact of Head Start on parents?[2]

To answer this question, I identified and reviewed 39 longitudinal[3] studies of Head Start children and families, of which 17 reported parent outcomes. In my review of these 17 studies, I analyzed both the reported outcomes and the research

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[1] In this paper, the term parents means the child's psychological parents, whether or not they are also biological parents.

[2] The review encompassed longitudinal studies of Head Start children and families rather than focusing only on long-term studies of Head Start programs. Thus some studies investigated the impact of diverse approaches to early care and education services, but included an examination of the outcomes of Head Start-participating parents.

[3] Longitudinal is defined as "lasting beyond the initial Head Start year" for this review. This means that some results reported by some studies reflect outcomes experienced by parents while they are still participating in Head Start. This is noted during the analysis of the studies presented later in this paper.

design of these studies, looking for both the strengths and weaknesses of the design and reflecting on the implications of both for the validity of the findings.

Using stringent research design criteria, I selected for in-depth analysis five strong longitudinal studies - involving in total more than 2,500 families in different parts of the country at different points in Head Start's 32-year history. In these studies I found a persistent pattern of Head Start parent progress in the skills needed to promote children's educational success in our school systems.

Specifically, these five large-scale longitudinal studies clearly suggest that Head Start (in either typical or demonstration forms) systematically helps parents achieve positive outcomes. I found two patterns[4] of parent outcomes in these studies:

1. improvement in parental ability to promote early learning skills (including early literacy skills);
2. greater participation in their children's later schooling.

These consistent patterns suggest that Head Start, either in its regular form or in programs especially configured to focus intensively on families, helps parents acquire new skills - skills that may lead to better lives for their children and themselves.

This paper discusses the social policy context for this exploratory review; briefly describes the findings from a look at those previous Head Start research reviews that have sought to ascertain (at least in part) whether Head Start has

[4] For this review I defined pattern as a finding that converged across two or more studies. In terms of the families themselves, this would mean that some aspect of parent change was found among at least 400 (or more) families participating in Head Start in different years and in different parts of the country.

parent effects; explains the methods I used to identify, read and analyze longitudinal studies of Head Start children and families for this review; discusses the parent outcome-focused findings that converge across two or more of the studies included in this analysis, within the context of those research design attributes that lend strength to and those that limit the study's findings; and reflects on the implications of the findings thus far for future research.

The Policy Context for this Review

In the 1990s, among the three most fruitful sets of policy research questions for Head Start-relevant researchers to ask are:

1. Does the program "work"? Does it produce the comprehensive child development benefits it is intended to produce? And, as the Advisory Panel for the Head Start Evaluation Design Project (Advisory Panel for the Head Start Evaluation Design Project, 1990) so rightly asked: if Head Start works, then for whom, in what circumstances and why?
2. Do parents mediate child outcomes (parent involvement for the sake of the child) and does this, coupled with current demographic and policy conditions, indicate a need for Head Start to strengthen its activities designed to build partnerships with parents, in order to better attain and sustain child benefits?
3. Is there a systematic dimension of parent benefit resulting from Head Start or from highly family-focused Head Start demonstrations (parent involvement for the sake of the parent, as well as the child and the child's other family members)? If so, which outcomes are realized now by Head Start programs? Which would be realized with different configurations of Head Start? Do these parent outcomes, coupled with current demographic and policy conditions, indicate a need for Head

Start to strengthen its engagement with parents, in order to better attain and sustain parent benefit?

These last two sets of questions, in different forms, have been long advocated as important themes for Head Start research by such scholars as Ed Zigler of Yale University, Julius Richmond of Harvard University, and members of the National Conference of Minority Scholars Interested in Head Start Research. These questions have also been particularly addressed recently by the National Research Council and the Institute of Medicine, which specified a relevant research agenda (Phillips & Cabrera, 1996). This study seeks to be synergistic with the policy research issues raised by the third question. Hence, this section of the paper focuses on the policy context relevant to the issues raised by this third question.

What are the best ways to disperse public spending for the Head Start program? For Head Start policy, current conditions among the poor mean that many difficult choices present themselves. Should Head Start concentrate on reaching more of the growing numbers of preschool children in poverty with a part-day, part-year child development program, so that at least some additional preschool children will get health care, early childhood education and hot meals?

Or should Head Start better protect and care for the growing numbers of current children in poverty whose parents are (or will be) in the work force on a full-time (or more than full-time) basis? To do so, should Head Start funds be used to (1) lengthen the day and the year during which Head Start services are provided and/or (2) develop cooperative arrangements with child care providers?

Should Head Start concentrate on their graduates' transition into the primary grades, in order to better sustain gains made in Head Start? Or greatly expand services to infants and toddlers, who are especially vulnerable to harm in

substandard child care arrangements - the kind that parents with highly limited financing can afford?

Despite the immediacy of these policy issues, recent trends indicate the need to address yet another issue of great importance: should Head Start evolve, with appropriate support, from a *child* development program significantly emphasizing family involvement to a *family* development program profoundly focused on child well-being? (Oyemade, 1985; Washington & Oyemade-Bailey, 1995; Zigler & Muenchow, 1992).

In the 1990s, the policy response to poverty has been influenced by the ascendancy of deficit reduction (and therefore expenditure shrinkage) as the primary domestic policy objective among federal policymakers; the enactment of welfare reform that values economic self-sufficiency over other human activities and deprives even lawful immigrants of the resources that other taxpayers can access; and the increasing emphasis on cost-containment in both public and private health care financing for low-income families (including employed families).

Thus, low income families with young children will be expected to sustain or attain high levels of economic self-sufficiency under increasingly severe time pressures; and bereft of many of the supportive health and human services that families living in dislocating and dangerous conditions need, causing these families to be more stressed. One likely result will be more child neglect, and more highly stressed family relationships leading to more family violence – with subsequent removal of children from families into child protection services, including foster care.

During this period, however, despite the profound reduction in funds for other human services, financing for early care and education services has continued to grow somewhat. policymakers have acknowledged that care must be available

for the children when parents are in the labor force. Congress has recently decided that approximately 1 billion dollars more a year for the next six years will be spent on child care. In addition, in 1996, Congress increased the appropriations for Head Start by $411 million and in 1997, by $375 million. President Clinton, in early 1998, proposed a $21 billion expansion encompassing both Head Start and child care.

Thus, for the foreseeable future, providers of early care and education services will continue to be a presence in the lives of low-income families. Parents may rarely (or never) see a health care provider, a mental health practitioner or a supportive caseworker. However, if they use early care and education services for their children, many will frequently see these practitioners, albeit in some cases briefly. These are the adults, then, who will be called on by highly stressed parents for help.[5] These are the practitioners who, with some well thought-out additional support[6], might be able to promote family as well as child development.

Thus, policymakers facing the policy climate of the '90s would be better-equipped to make more effective and family-friendly decisions by knowing more about the impact of Head Start on parents. If systematic parent benefit (as well as child benefit) results from Head Start, policymakers will be better able to persuade taxpayers that this use of their dollars is highly cost-effective. If Head Start's benefits to children come about in part because of what happens to parents, then more knowledge about parent effects can help parent-practitioner partnerships better achieve and sustain positive child outcomes, through more finely-grained partnerships with parents during both the Head Start and subsequent primary

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[5] Understaffed and underpaid, these practitioners are themselves under pressure. A scenario in which highly-stressed parents are turning to highly-stressed Head Start and child care staff is not a good one, but it is a likely one. Thus Head Start policy needs to address this issue on a program-wide basis, beyond the excellent research and demonstration efforts now in place.

[6] Increased support is needed to hire additional practitioners, especially those trained to work with adults, or to provide training (and reduction in child-related responsibilities) to the practitioners currently working with children.

school years.

And if Head Start does promote positive parent outcomes then practitioners, parents, researchers and policymakers should make every effort to understand what the full range of those benefits are. With this knowledge, we will help Head Start in turn help families survive and prosper, even in the face of adverse economic and social conditions.

The Research Context for this Review

In the thirty-two years since its founding, Head Start has achieved national and international recognition as a successful *child* development program. However, numerous accounts by parents also attest to Head Start success, at least for some individuals, as a *family* development program. That is to say, numerous anecdotal reports, testimonies before policymakers, interviews with parents (by researchers and others) -- as well as observations by Head Start staff -- speak to the belief that Head Start helps parents change their lives (Greenberg, 1969/1990; National Head Start Association, 1990; Robinson & Choper, 1979; Sorenson, 1990; Zigler & Muenchow, 1992). And parent change is highly likely to affect the whole family.

In contrast to this rich body of personal statements, the Head Start research literature (which is quite voluminous) seems strangely silent. When it does address Head Start's impact on parents, the conclusions are somewhat contradictory. Three major Head start-focused research reviews have included an analysis of Head Start's impact on families: (1) A Review of Head Start Research Since 1969, (Mann, Harrell, & Hurt, 1977); (2) What Head Start Means to Families, (O'Keefe, 1978); and (3) The Impact of Head Start on Children, Families and Communities: Head Start Synthesis Project, (McKey et al., 1985). In addition, in 1989, Collins and Kinney, 1989 carried out a thoughtful (although much less comprehensive) review of major Head Start studies for the Head Start Evaluation

Design Project, Head Start Research and Evaluation, (Collins & Kinney, 1989). Briefly below are the conclusions of these research reviews.

Mann, Harrell and Hurt (1977), analyzed 59 research reports (762 documents in total) and found 17 reports that included findings related to the impact of parent participation in Head Start on the family. The authors concluded that "the majority of studies report an improvement in parenting abilities...and some studies report an increase in positive interactions between mothers and children, as well as an increase in parent participation in later programs" (Mann et al., 1977, p. 13).

O'Keefe (1978), examined 18 original Head Start studies and 6 research reviews/analyses (of Head Start and other studies), in a review specifically focused on the family dimension (not only the family impact) of Head Start and concluded that Head Start's family effects included increased social contact for parents and strengthened understanding and ability of parents to support their child's education and development in the primary grades.

The Head Start Synthesis Project reviewed 210 studies, and based their conclusions about Head Start's family impact on findings from 75 studies. The reviewers found that actively-participating parents "have high levels of psychological well-being, improve their economic and social status and have children with high levels of developmental achievement." (McKey et al., 1985, p. 23) They also note that Head Start has not been successful in changing attitudes and that "mixed results" flow from "parent education programs designed to influence child-rearing practices" (McKey et al., 1985, p. 23).

Collins and Kinney (1989), analyzed 9 Head Start major specific studies, one follow-up study and two research reviews and concluded that Head Start's record of strengthening families is "known primarily through anecdotal

information" (p. 10).

These research reviews provide useful insights about the record of research regarding the assessment of Head Start's parent outcomes. It's important to note, however, that in reviewing studies that report parent effects, the reviewers have not systematically excluded those studies with quite poor quality. This may limit the findings of the review (Gamble & Zigler, 1989). In addition, these reviews included cross-sectional as well as longitudinal studies, but did not highlight the findings of the longitudinal studies, despite their greater merit.

In addition to research, many thoughtful analyses of the relationships between family support and early care and education programs (including Head Start) have been made available. In the last twelve years, for example, the Carnegie Corporation of New York, Zero to Three/The National Center for Clinical Infant Programs, the National Association for the Education of Young Children, Wheelock College, the National Head Start Association, the Families and Work Institute, the Harvard Family Research Project, the Bush Center in Child Development and Social Policy at Yale University, the Family Resource Coalition, the Family Impact Seminar and other entities have explored the child development and family support dimensions needed in the organization of early care and education policies. (Advisory Panel for the Head Start Evaluation Design Project, 1990; Carnegie Corporation of New York, 1994; Cohen & Ooms, 1994; Collins, 1993; Family Impact Seminar, 1991; Galinsky & Weissbourd, 1992; Hamburg, 1992; Levine, 1993a; Lopez & Hochberg, 1993; Pizzo, 1990; Powell, 1989; Replogle, 1995; Smith, 1991; Smith, Blank, & Bond, 1990; Smith, Blank, & Collins, 1992; Washington & Oyemade-Bailey, 1995; Zero to Three/National Center for Clinical Infant Programs, 1992; Zigler & Freedman, 1987).

In addition, new and pioneering research projects at Yale (the Family Education and Training Project), (Hamilton-Lee & Kagan, 1994; Hamilton-Lee, 1995;

Kagan et al., 1992; Rustici, Kagan, & Hamilton-Lee, 1996); at Harvard, such as the Head Start-related projects of the Harvard Family Research Project (Replogle, 1995), or ethnographies of Head Start parents at the Harvard Law School (White, 1994)as well as at the National Council of Jewish Women have also focused on the family dimension of early care and education programs. In addition, with a distinct emphasis on the diversity of low-income families, the National Research Council's Board on Children and Families has synthesized a wide range of research generally related to child care, Head Start and families (not necessarily only outcome-focused research). (Phillips & A., 1995; Phillips & Cabrera, 1996).

However, none of these efforts have addressed in depth the particular research question around which this paper is organized: *what do currently available longitudinal studies of Head Start children and families tell us about Head Start's impact on parents?* The following sections address this core question..

Methods for this Review

Three methods were used to carry out this review. (1) identification and retrieval of longitudinal studies and related documents; (2) selection of longitudinal studies with parent outcomes; and (3) in-depth analysis of those studies with significant research design strengths [7].

Identification and retrieval

Given the relative accessibility of the research base for Head Start, I initially concentrated my efforts on studies of *Head Start children and families only*, not on studies of child care, early intervention and other early care and

[7] To design this research review, I used Cooper and Hedges' 1994 book on research syntheses (Cooper & Hedges, 1994) and Light, Singer and Willett's book on research design . (Light, Singer, & Willett, 1990)I also benefited from interactions with Gary Orfield, Shep White, Judith Singer, Terry Tivnan, John Willett and Michael Huberman and other faculty of the Harvard Graduate School of Education as I developed my plan for this literature review. Mid-way through this review, I also began to work with Carol Weiss, who was of much help to me.

education services. In addition, because well-designed longitudinal evaluations provide one of the best approaches to understanding the impact of social programs, I concentrated on identifying, obtaining and cataloguing longitudinal studies (Light et al., 1990; Weiss, 1972).

The initial phase of the effort was organized around a central goal: "casting a wide net" to capture as many studies as possible, including those that are part of the "fugitive" unpublished literature, as well as those that are published and/or widely recognized.

To identify, track down and procure studies, particularly those from the 1970s and '80s as well as those from the "fugitive" literature, I asked 22 experts (See Appendix A), including current and former project officers in public and private grantmaking agencies as well as authors of prior reviews with either a substantive, methodological or policy focus to nominate either research reviews or actual studies that I might choose for my analysis.

In addition, I conducted computerized and manual searches to identify for later review abstracts of research reports and related documents; reviewed annotated bibliographies (Ellsworth Associates Inc., 1993; Ellsworth Associates Inc., 1994; Ellsworth Associates Inc., 1996; Mann et al., 1977; McKey et al., 1985); reviewed summaries of unpublished research (e.g. summaries found in recent conference proceedings); and collected actual studies. (See Appendix B for a more detailed description of the searches).

Review and preliminary analysis

I reviewed over 4000 abstracts and brief summaries of research studies (e.g., handouts at poster sessions) about Head Start children and families. I looked first for abstracts that reported studies described as "longitudinal" or "long-term" or as measuring the effects of Head Start in one or more of the primary grades.

From this pool of studies, I identified 39 longitudinal studies of Head Start children and families and 2 substantial follow-through studies [8].

I then re-reviewed the abstracts, looking for summaries that reported parent "change", "effects", "impact", "outcome" or similar phrases that suggested parent data relevant to the research question. I examined the "results and conclusions" sections of these studies, to ascertain whether they reported any "parent data:" changes in parent knowledge, skills, attitudes or behaviors. If they did, I classified them as longitudinal studies that reported parent outcomes. I found 17 longitudinal studies that met these criteria.(See Table 1)

In-depth review

I analyzed the 17 longitudinal studies[9] that reported parent outcomes with criteria for research design developed from those proposed by Light, Singer and Willett (1990) in their book on planning research in higher education[10].

I was particularly interested in understanding how the researchers had dealt with the difficult issues of formulating a central research question or two; deciding on both sample size and selection; choosing (in experimental and quasi-experimental designs) a method of comparing groups; determining an approach to measurement; and dealing with attrition. To do so, I initially developed a detailed "matrix" or coding instrument for recording the characteristics of each

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[8] I identified quite a few abstracts that summarized Follow-Through studies but they seemed to indicate a retrospective look at Head Start participation. I wanted to examine Follow-Through studies that had collected data during the Head Start year and then followed children prospectively into Follow-Through. Initially it looked as though these abstracts identified studies that had used this kind of design. However, I was unable to identify any Follow-Through studies that had used this approach and so I eventually eliminated Follow-Through studies from my review.

[9] I analyzed research reports from all 17 studies. I set July 1997 as the last date for final research reports (specifically, reports published or made available before July 1997) from studies that would be analyzed for this paper. For three of the studies, I was unable to obtain some of the technical information I needed to complete the in-depth review. Thus I completed in-depth review on only 14 longitudinal studies.

[10] At present, there is no comparable book focusing on critical elements of research design relevant to early care and education. However this book on such elements relevant to higher education is an excellent resource for any individual attempting to plan or analyze research designs in education at any level.

evaluation.[11] To design this instrument, I also used several major published resources in both the field of research methodology and the field of Head Start/early intervention research (Advisory Panel for the Head Start Evaluation Design Project, 1990; Campbell & Stanley, 1963; Collins & Kinney, 1989; Jackson, 1978; Light & Pillemer, 1984). However, for a variety of reasons, this coding instrument proved too cumbersome to use and I relied instead on a combination of detailed notes and memos to record the characteristics of the studies.

In-depth analysis

After reviewing each of these studies in some depth, I decided that there is no methodologically perfect longitudinal investigation of Head Start children and families. Each study had some strengths and some limitations. Thus I decided to set some criteria for inclusion of studies in this paper - criteria that I hoped would balance enough design strengths with limitations to permit me to discern whether these studies suggested any parent effects from Head Start. I was also interested in learning whether these studies might offer some future researchable questions about Head Start and parent outcomes.

For this analysis, I set the following criteria.

For experimental and quasi-experimental longitudinal studies:

- final sample sizes of at least 200 families,[12] so that the statistical analyses could be done with large samples;
- the use of either random assignment to treatment and control groups or the use of matching along several key family characteristics to form comparison groups;

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[11] I am indebted to several members of the faculty of the Harvard Graduate School of Education for their helpful advice as I was developing this instrument, particularly Gary Orfield, Terry Tivnan, Michael Huberman and John Willett as well as teaching fellow Suzanne Graham.

[12] I initially considered choosing a final sample size of at least 80 families (40 in each comparison group). However, on reflection, I decided to concentrate on experiments with larger samples. I reasoned that with this size sample, there is less chance of failing to find an effect, if most other aspects of the design are strong.

- two or more timepoints for data collection relative to parent outcomes; and
- the use of detailed attrition analyses to rule out as much as possible the non-equivalency of groups.

For non-experimental investigations:

- final samples of at least 200 families;
- the sample selected from both Head Start-participating and non Head Start-participating families;
- at least six years of longitudinal study;
- three or more timepoints, including a pre-test, for data collection relative to parent outcomes; and
- the use of detailed attrition analyses to rule out as much as possible the non-equivalency of groups.

Using these criteria, I identified five studies for further, more detailed analysis (See Table 2). Given the somewhat archeological nature of this review, I report results of this in-depth analyses in chronological order, starting with the most recent study. (See Table 3 for an overview of the studies, their findings and their design characteristics)

1. *Early Learning and Early Identification Study (1987-present)*

Overview

The Early Learning and Early Identification Study is designed to investigate the impact of early learning programs sponsored by the District of Columbia public schools (DCPS) on children's long-term school success. It was developed and implemented to inform DCPS decision-makers about the reasons for high school failure -- and about better alternatives -- in the public schools. It is an ongoing study. Currently available research reports describe this study as a six

year quasi-experimental two-cohort[13] study of an initial sample of approximately 650 children and parents -- 500 children randomly selected from DCPS-sponsored preschools and Head Start programs, matched in year two with 100 randomly selected no-preschool kindergarten children (R. Marcon, Personal Communication, 1995).

In the course of this extensive study of child outcomes, information about parents was collected at multiple timepoints, in order to assess parent involvement in their children's schooling as predictors of child outcomes.[14] In a sub-study, parent participation in their children's schooling is treated as an outcome and the data collected is used to analyze the predictors of such involvement. Consequently, I am focusing here on a sub-study of an initial sample of 295 Head Start and preschool parents, in one cohort,[15] that investigated the predictors of parent involvement in preschool, kindergarten, first grade and "year six" (when the children were approximately nine years old) (Marcon, 1993). In this sub-study, data about high versus low levels of parent involvement[16] were used, along with other data about the school, the child and the family, to predict one parent outcome: subsequent participation in their children's schooling (as well as to predict child outcomes)[17].

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[13] Originally three cohorts were studied but only two cohorts were followed to year six.

[14] The reader is referred to Marcon, 1988, 1989, 1990, 1993a, 1993b 1993c; and 1994 for an exceptionally detailed discussion of the overall study and its findings.

[15] Numbers are approximate, as they reflect numbers of children, rather than parents, and there were some sets of twins in the study. At year two (kindergarten), there are 277 combined pre-kindergarten and kindergarten parents; at "year six"(fourth grade for most children), 245 parents. I am indebted to Dr. Rebecca Marcon, the principal investigator of the Early Learning and Early Identification Study, for providing me with these numbers.

[16] As defined by a score on annual teacher ratings of parent involvement. Parents were rated as to their involvement in (1) parent-teacher conference (without which parents, by DCPS policy, could not obtain their children's report cards); (2) home visit by teacher; (3) extended class visit by parent; and (4) parental help with class activity. Parents who fulfill either none or one of these criteria are classified as "low; " parents who fulfill three or four of these criteria are classified as "high."

[17] The research paper for this sub-study does not explicitly mention a research question (Marcon, 1993, November).

Findings

As displayed in Table 4, the Early Learning and Early Identification Study found that Head Start enrollment is the best predictor of parent involvement during preschool.[18] In turn, for those parents whose children had been enrolled in early childhood education, high preschool parent involvement is the best predictor of parent participation during kindergarten. Then, at first grade, high preschool parent involvement is the second best predictor of involvement by parents (with high kindergarten involvement being the third best predictor). Finally, high kindergarten parent involvement is the best predictor of parent participation during "year six"(approximately 4th grade, if the children have not been retained) of their children's schooling. The results of multiple regression analyses[19] for these findings are displayed in Table 4, which has been reproduced from a research report of this sub-study (Marcon, 1993 p. 12).

Strengths of the study

The strengths of this sub-study lie in its large sample[20], use of sample stratification and random sampling within strata, multiple timepoints for data collection and the length of time the parents are followed. For both the overall study and the sub-study, the sample of initial preschool and Head Start participants was randomly selected from a stratified sample of randomly selected classrooms of three different curricular types.[21] The stratified sampling frame was constructed by first analyzing the proportion of Head Start and pre-kindergarten children in the

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[18] All findings are statistically significant at least at the p.<05 level.

[19] These analyses also looked at school (type of preschool and of kindergarten); child (sex, ethnicity, age, absences and previous grade retention); and family (SES, single-vs. two-parent family, mobility and geographical location).(Marcon, 1993, p. 4).

[20] The regression analyses are not carried out on all 245 parents that comprised the "year six" sample, since the parents were classified into either low or high involvement categories based on the method described above. Thus, those parents who obtained a rating of "2" -- and thus had average involvement -- were not included in the regression analyses. Thirty-one percent (77 parents) were classified as high involvement; 41% (101 parents) were low involvement; and 28% (67 parents) were average involvement (R. Marcon, Personal Communication, 1996).

[21] These different preschool curricular types (child-initiated, teacher-directed and "middle-of-the-road" compromise) were identified through a survey of all DCPS pre-kindergarten and Head Start teachers of four-year olds (Marcon, 1994, p. 8).

four quadrants of the District of Columbia (upper-Northwest, mid-Northwest, Northeast and Southeast/Southwest), and then by analyzing the proportion of the three preschool curricular types in each of the four quadrants. Sampling was roughly proportional to types of preschool curricula found in the four regions (Marcon, 1994, p. 9, R. Marcon, Personal Communication, 1995,1996).

In this sub-study, the data about children and parents was collected at four timepoints -- at the end of the school year in pre-kindergarten, kindergarten and first grade; and at the transition from 3rd to 4th grade ("year six"). The children's teachers were asked to rate parents as to their levels of involvement. The teachers were scattered proportionally throughout the District of Columbia: in year one, in 39 schools; by year six, in 80 schools (Marcon, 1994, p. 9).

Limitations of the study

The lack of experimental design, the focus on only one parent outcome, and the attrition from the original sample limit the study's findings. Although the comparison children are matched by sex, ethnicity and income level (as measured by eligibility for subsidized school lunch), there are other characteristics, pre-existing the parents' decision to enroll their children in early childhood education or not, as well as the decision to choose either Head Start or another preschool, that might play a substantial role in these decisions and in later decisions about levels of parent involvement. One such characteristic might be maternal employment; another might be family size. In addition, the use of eligibility for subsidized school lunch as a measure of income level does not distinguish variation in income as well as other measures would.

Without matching on a more extensive number of characteristics — or without random assignment of children and families to either the Head Start/preschool or the no-preschool group — it is not possible to definitively state that the higher parent involvement in their children's later schooling found by this study is actually the result of Head Start. Furthermore, while the use of teacher

ratings of parent involvement has some merit (as compared, for example, with parent reports of their own involvement), teacher recall at the end of the school year may not always be precise[22] or free from personal bias. The use of independently coded observations, even in a sub-sample, would have provided data that might have counterbalanced the possible flaws in teacher ratings.

Finally, attrition between the original and final sample, although lower than found in other large-scale studies (about 28 Head Start and preschool parents could not be recovered at kindergarten and about 32 additional parents could not be recovered at year six, for a sub-study attrition rate of about 17%), raises some questions about the study's findings. The researcher notes that analyses of the attrition in the overall study showed that poorer and more minority families comprised the final sample,[23] but that this reflects the naturally occurring pattern of child enrollment in the public schools of the District of Columbia, since middle-class parents (both African-American and White) tend to withdraw their children after either preschool or kindergarten from the public schools. The final sample for the study recovered 90% of the first-grade children and thus is reasonably representative of the parent population that uses the D.C. public schools.

Conclusion

This study suggests that Head Start enrollment influences later parent participation in their children's schooling. However, possible non-equivalency of the Head Start, other preschool and no preschool groups limits the study's findings.

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[22] The teachers only had to indicate whether parents met the threshold criteria for involvement in each of the categories-whether they had paid an extended visit to the classroom or not, for example. They did not have to recall any details about that category of involvement.

[23] Families not recovered from the original sample do not differ from the families who are in the final sample, with regard to certain characteristics: degree of parent involvement and sex of the child. Other characteristics (dual versus single parent leadership and income) did differ in the final sample from the original sample (families were poorer and more likely to be single parent) but there were no differences on these dimensions between the first grade sample and the final sample. The one characteristic that was different among the original, first grade and final samples was ethnicity: the sample became gradually more African-American (R. Marcon, Personal Communication, 1996).

2. *Child and Family Resource Program (1977-1980)*

Overview

The Child and Family Resource Program (CFRP) evaluation investigated impact on both children and parents of a highly family-focused Head Start research and demonstration program that served pregnant women and mothers of infants (as well as the infants and toddlers) with center and home based activities designed to strengthen the family.

The evaluation of the infant/toddler component of the Child and Family Resource Program (CFRP) was designed to be a five-year study, across five study sites, of an initial sample of 409 low-income families with children under age one who were randomly assigned to either a treatment group (the CFRP program) or a control group.

The CFRP evaluation addressed four objectives: 1) to describe CFRPs and their operations; 2) to identify program models; 3) to link family outcome to participation or non-participation in CFRP; and 4) to link family outcome to particular aspects of the CFRP treatment and to family characteristics (Travers, Nauta, & Irwin, 1982, p. 7).

Findings

The CFRP evaluation found that this Head Start research and demonstration program improved parental teaching abilities (specifically those abilities that help promote early literacy in children). The most important changes occurred in the frequency of:

- overall parent child interaction;
- parent-child interaction rich in language information, or involving teaching in which the child attempted mastery of some tasks.

In addition, the CFRP participating parents showed some modest differences in the degree to which they experienced frustration or irritation during a child's demand for attention; in the degree to which they exercised control; and in parents' willingness to allow the child choice and initiative.

Strengths of the study

The strengths of the study lie in the use of (1) an experimental design, including random assignment; (2) at least four data collection timepoints, including a pre-test; (3) both quantitative and qualitative methods;(4) the length of the data collection (three years); (5) a large sample (over 240 families in the final sample); (6) multiple sites; (7) a multi-method approach to assessing outcomes; and (8) a variety of analytical approaches to investigating the equivalency of the groups compared.

Limitations of the study

The flaws in the evaluation's design detract somewhat from the strengths of the findings. The lack of specific research questions guiding the CFRP and its evaluation may have contributed to an unresolved ambivalence between child and family outcomes as the primary purpose of CFRP.[24] In addition, the high level of attrition (38%) raises questions about the representativeness of the final sample. Most of the attrition was caused by family relocation. However, membership in the non-predominant racial or ethnic group in the program was the second most common reason for dropout from the sample.[25] In addition, the CFRP participants in the final sample differed systematically from the control group on a few other

[24] For example, the final report of the CFRP evaluation implies that changes in interactive style of parents were conceptualized as predictors of child outcomes. However, as the ethnographic data from the study makes clear, CFRP staff, while focused on these interactive styles, were also quite divided as to whether or not parents should participate in extensive employment and training - participation that would take mothers out of the home. Thus, some parent outcomes pursued by the evaluation design and by some of the CFRP staff were viewed by other CFRP providers as potentially antagonistic towards the child outcomes that might be disrupted by maternal employment and training.

[25] That is to say, Caucasian parents seem to be likely to drop out more from the CFRP program if the predominant racial group was African-American and vice versa.

dimensions: CFRP families were smaller, had fewer wage earners, less education, and were less likely to be either enrolled in Medicaid or to interact with informal networks of support. They also had less continuous health problems. The possible systematic nature of the attrition as well as the sheer numbers of families who dropped out limit the study's findings.

Conclusion

The CFRP evaluation suggests that this type of highly family-focused Head Start helps parents improve both their overall interaction and their teaching interactions with their children. However, despite the strong research design of this evaluation, the attrition constrains the findings.

3. *Parent Child Development Centers* *(1970-1975; 1976-1980)*

Overview

The evaluation of the Parent Child Development Centers (PCDC) is essentially the study of outcomes from three programs with similar (but not identical) approaches to the delivery of Head Start services to infants and toddlers – a primarily center-based approach intended to help "parents become more effective child-rearing agents as the primary path to reaching the goals for children." (Bridgeman, Blumenthal, & Andrews, 1981, p. 1).

One could conceptualize the study as a multiple-cohort[26] eight -year study,[27] in three sites, with a large initial sample of 593 pairs of parents and their children aged approximately birth to four years,[28] randomly assigned to program and control groups (Bridgeman et al., 1981). However, the PCDC evaluation can also be perceived as *three* separate, site-specific evaluations, of three distinct programs sharing a common goal, with each program investigated by an eight-

[26] 3 cohorts in Birmingham, 7 in Houston and 4 in New Orleans

[27] not counting the pilot years

[28] in one of the sites, Houston, mothers began participation when their children were one year old.

year, multiple-cohort study, each with fairly large samples of parent-child pairs[29], randomly assigned to program and control groups. The authors of the research report seem to conceptualize the study in both ways, although they present the findings in "an integrated picture" (Bridgeman et al., 1981). This analysis adopts the integrated perspective, with attention to site-specific details.

Neither the PCDC research design nor the analyses are guided by explicit research questions. However both the design and analyses do directly address the aforementioned goal of the program.

Findings

Like the CFRP study, the PCDC evaluation found improved effective teaching styles among parents and in overall parent-child interaction. As Table 5 shows, at the time of graduation from the program (when children were 36 months old) the overall parent pattern across the sites was positive in these two general areas.

In Birmingham, parents showed more positive interaction with their children[30] (more active participation with their children, playing with the child, asking the child questions and more general conversation with the child) as well more effective teaching-type interaction (the use of questions versus orders, use of praise and encouragement, etc.). In New Orleans, parents also engaged in more positive interaction with their children (more positive language, less control language, etc.), showed greater sensitivity and more effective teaching-type interaction similar to that of the Birmingham parents. In Houston, parents showed better teaching-type interaction (used more praise, encouraged the children's verbalizations more); provided a more stimulating environment at home (more

[29] In Birmingham, the total final sample was 186 pairs (107 program and 79 controls); in Houston, 208 pairs (99 program and 109 controls); in New Orleans, 98 pairs (46 program and 52 controls).(Bridgeman et al., 1981)

[30] All results reported in this section are statistically significant at the $p.< .05$ level, at least.

appropriate playthings, more opportunities for variety in daily routines, etc.) In addition, in structured interviews, more Birmingham and New Orleans program-participating parents supported positive means of child control (less use of punishment as a strategy to control children) (Bridgeman et al., 1981, pp. 60-69).

At 48 months, one year after graduation, the Birmingham program parents continued to show more effective teaching-styles and there was a positive trend among these parents for overall interaction with their children.[31] The New Orleans parents did not show this same pattern.[32]

Strengths of the study

The strengths of this study lie in its large sample and use of random assignment. In all three sites, videotape observations were coded with varied rating systems to assess parent outcomes at least three times. In two sites (Birmingham and New Orleans), a parent questionnaire was also used. In addition, a home environment inventory was used in Houston. While all three sites videotaped both a structured teaching and a waiting-room situation, each PCDC chose or designed its own observation instruments and questionnaires/rating scales.[33] I know some analysts might be concerned by the design of measures specifically for a site, and would raise legitimate issues about the comparability of findings based on different observational coding systems. A counter argument revolves around important concerns regarding possible insensitivity of previously-designed standardized instruments to cultural and socioeconomic differences among the different sites.[34]

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[31] These results were statistically significant at the p.<. 10 level.

[32] at 48 months the sample of parents from New Orleans was small (17 program participants and 28 controls). Consequently, statistically significant effects would be less likely detected (Bridgeman et al., 1981, p. 106).

[33] In the early 1970s when data collection first took place, the researchers report that there were few reliable and valid ways to use observation to assess interaction between low-income mothers and such very young children. In addition, the researchers did not want to impose instruments on three programs that differed culturally.

[34] The researchers studied both inter-tester and inter-scorer reliability, but the results of these tests are not included in the research report.

Limitations of the study

The study is limited by a strikingly high attrition rate (over 50%). However, the researchers collected baseline descriptive data on such characteristics as income per person, mother's education and age, number of children in the families, father presence, and child scores on the Bayley Mental Development Index, looking at all families as they entered the study and then again at 36 months.[35] They found virtually no significant differences between the dropout and final samples.

Conclusion

The findings of the PCDC evaluation - that parents improved both their overall and teaching interactions with their children - are bolstered by both the strong design of the study and the emergence of this finding in multiple cohorts across the three PCDC sites. Yet the high attrition limits these findings, although the force of this limitation is diminished somewhat by the attrition analyses that showed, at least for certain demographic characteristics, that the original families did not systematically differ from the families that completed the study.

4. *Home Start (1972-1975)*

Overview

The evaluation of Home Start was intended to assess the effects of a home-based approach to the delivery of Head Start services. It was designed to be a three-year, multi-site study of an initial sample of 556 families, with children aged three to five who were randomly assigned to either a Home Start group or a delayed-entry control group, or were randomly selected from Head Start programs to form a comparison group.

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[35] It is not clear whether similar detailed attrition analysis was carried out for the 48th month sample.

This study has three components: summative, process and cost-effectiveness evaluations. The analysis of the data collected was organized to answer several distinct questions. Among these was the question relevant to this review: was Home Start effective for parents?

Findings

This study found that Home Start mothers were, after seven months, more likely than controls to read more often to their children and to provide more books and playthings. In addition, Home Start mothers interacted more frequently with their children and used a more effective teaching-type interaction. However, once the delayed-entry control group began participating in Home Start, the differences between program and control mothers diminished.

Strengths of the study

The strengths of the Home Start evaluation primarily lie in its large sample, and extensive data collection across six sites for the summative evaluation and across 16 sites for the process evaluation.[36] The sample was drawn from six sites, chosen from the 16 sites in which Home Start operated. While these six were not randomly selected, the extensive descriptive data collection on family and staff characteristics, on services provided to families and on financial expenditures in all 16 sites permitted analyses which concluded that "there were no major differences between the summative sites and the other ten." (Love, Nauta, Coelen, Hewett, & Ruopp, 1976, p. 42).

At each of the six sites, researchers tried to involve 120 families (40 in each of the three study groups). The pretest sample of 556 families fell a bit short of that goal, but is nonetheless substantial. The measures used to assess parent outcomes included a home inventory (High/Scope Home Environment Scale); a parent rating scale completed by the community interviewer (Mother Behavior

[36] Home Start, as a demonstration program, operated in 16 sites across the country.

Observation Scale); coded observation of parent-child interaction (the 8-Block Sort Task); and an extensive parent interview. Data collection took place at four timepoints (including a pre-test) for the program, control and Head Start groups. (In addition new program and Head Start groups were assessed at two timepoints, in a seven-month replication study.)

Limitations of the study

Despite these considerable strengths, the findings of the Home Start evaluation are limited by the nature of the comparison groups as well as by substantial attrition. Use of a delayed-entry control group in a study designed to assess outcomes over a two-year period meant that in the second program year, the control group was getting the benefits of one year of Home Start, making it quite difficult to obtain a clear longitudinal picture of the results of the program. In addition, using random assignment only for the Home Start and Head Start groups limited more meaningful comparisons between Head Start and a no-treatment control group or between Home Start and a no-treatment control group.

In addition, a high attrition rate (58% for program, 56% for control and 57% for Head Start participants[37]) limits the conclusions about outcomes that might be drawn from this study. The researchers carried out analyses comparing the families at pretest with those at each of the three subsequent timepoints for data collection, and concluded that "attrition appears not to have added any serious bias to the group comparisons" (Love et al., 1976, p. 42). Nonetheless the high attrition rate limits the confidence with which the findings can be put forward.

Conclusion

The Home Start study strongly suggests that parents participating in this demonstration of a home-based approach to Head Start improved both their overall interaction as well as their teaching-type interaction with their children. In

[37] Percentages are for children.

addition, they read more to their children and provided more playthings. These findings are underscored by the research design strengths of this evaluation, but high attrition somewhat limits these conclusions.

5. *ETS-Head Start Longitudinal Study (1969-1974)*

Overview

The ETS-Head Start longitudinal study was a six-year, nonexperimental study of children in three regionally distinct communities' elementary school districts, chosen in part for their substantial populations eligible for Head Start. It was intended to be a study of child development as it occurred between the ages of at least three and one-half (prior to any enrollment in Head Start or other preschool) and eight and one-half to nine years, among economically disadvantaged children who participated in either Head Start, other preschools or no preschool at all.

The primary focus of the study is not to evaluate Head Start, but to study child development among economically disadvantaged children, with parents studied at several timepoints to obtain information about "background" characteristics that would illumine the child-focused findings. Thus, I cannot describe the parent-related information available from this study as "parent effects". However, comparisons of characteristics of over 1200 parents, prior to their decisions about Head Start or other preschool enrollment, and those same characteristics six years later, yield some interesting correlational parent data that are relevant to this review.

Findings

In year six, the study did not find an association between Head Start and the characteristics of all parents. However, in year six, when African-American Head Start-participating mothers [n = 559] are compared with African-American

mothers who had not enrolled their children in Head Start or any other preschool [n = 127], the study found that "there was a consistent trend for greater involvement/interest of Head Start mothers in educational activities (i.e., helping more with the study child's homework, visiting the child's classroom more often, attending more school meetings, expressing more favorable attitudes towards the study child's school and teachers, and having the child bring more library books home)..." (Shipman, McKee, & Bridgeman, 1976, p. 79).

Strengths of the study

The strengths of this study lie in its large, multi-site, naturally-occurring samples and the length of time the children and parents were studied.

Limitations of the study

However the limitations of this study are multiple. Attrition from the initial sample was substantial (over 1/3) and not random. A higher percentage of final sample children came from African-American, low SES families and were Head Start graduates. Attrition primarily occurred among white families, particularly in one site (Lee County, Alabama).[38] However the attrition did not dramatically affect the racial composition of the year six sample as compared to the year one sample: 65% of the overall study children and 88% of the Head Start attendees (and therefore, presumably, approximately the same proportion of parents) are African-American[39] (Shipman et al., 1976, p. 9).

In addition, researchers used a structured parent interview to assess parent characteristics at year six, with the consequent problems associated with parent

[38] the researchers explain that this attrition was primarily among white families temporarily residing in the area because of their connection with either a nearby military base or university (Shipman et al., 1976, p. 21). I think that racially-connected motivations for mobility out of all the school districts studied cannot be overlooked, unfortunately, as another possible explanation for nonrandom attrition.

[39] In year one, 63% of sample children are African-American (Shipman, 1971, p. 25).

report.[40] This limits the strength of the very substantial amount of information about parent characteristics that the ETS study retrieved.

Finally, given the very large size of the sample, it is unfortunate that non-English-speaking families were not studied.[41]

Conclusion

The ETS-Head Start longitudinal study finding -- that former Head Start parents have greater involvement with their children's primary grade schools -- is important, particularly given the study's extensive database about so many low-income families in three communities. However, as in several of the previously analyzed studies, attrition limits the study's findings.

Summary

In-depth analysis of these five large studies reveals a persistent pattern of parent progress, clearly associated with Head Start, in the skills and activities needed to promote children's educational success.

Parent-Related Findings In Other Longitudinal Studies

This persistent pattern of parent progress is corroborated in other longitudinal studies. The two patterns discussed above emerge only from studies selected on the basis of stringent research design criteria. But other valuable information can be found, for example, in well-designed longitudinal studies with smaller sample sizes (e.g. 100-200

[40] A multi-method approach was used at year one, combining direct coded observation with structured interview. Coded observation was also used at year two (the child's Head Start year), but not parent interview (Shipman et al., 1976, p. 31-33).

[41] (Shipman, 1971, p. 27)N(Shipman et al., 1976, p. 6)on African-American, non White participation in the study is noted as one percent (Shipman, 1971, p. 25).

families); ex post facto design; or non-experimental studies that involve only one sample of Head Start families over time (one group time-series). Three of these types of investigations are discussed briefly below:

1. The Parent Involvement in Head Start Study, the 1997 longitudinal study carried out by the National Council of Jewish Women (NCJW) (Parker, Piotrkowski, Kessler-Sklar, & Baker, 1997a; Parker et al., 1997b);
2. The Family Impact Study conducted by Leik and Chalkey (Chalkley & Leik, 1995; Chalkley, Leik, Duane, & Keiser, 1996; Leik & Chalkley, 1988; Leik & Chalkley, 1989; Leik & Chalkley, 1990; Leik & Chalkley, 1993; Leik & Chalkley, 1996a; Leik & Chalkley, 1996b; Leik & Chalkley, In press; Leik, Chalkley, & Duane, 1991a; Leik, Chalkley, & Peterson, 1991b);
3. Head Start Parental Involvement and the Economic and Social Self-Sufficiency of Head Start Families Study, carried out by Oyemade, Washington, and Gullo (Oyemade, 1989; Washington & Oyemade-Bailey, 1995)

The Parent Involvement in Head Start Study (Parker et al., 1997a; Parker et al., 1997b) yielded findings that are quite similar to the ones that emerged from the earlier studies analyzed above. Controlling for demographic factors and pre-test scores, the researchers found that greater parent involvement in Head Start was associated with (1) improved parent-child teaching interaction (the kind of interaction which promotes early literacy) and (2) increased later parent participation in children's schooling.[42] (Parker et al., 1997a, pp. 106, 109) This non-experimental investigation followed 119 Head Start

[42] Results statistically significant at the $p. < .05$ level or less.

families through both the Head Start experience and the subsequent kindergarten year. The study used a comprehensive approach to data collection. Eleven different extensive measures were used to obtain data about parent progress. Parent outcome data was collected at 3 timepoints, including a pre-test that collected information about 41 variables describing family demographic contextual and personal characteristics. It is noteworthy that the most recent longitudinal investigation of parent outcomes associated with Head Start has such similar findings to the earliest longitudinal investigations of parent outcomes linked to Head Start.

The Family Impact Study is originally an exceptionally interesting cross-sectional project and now a longitudinal study (Chalkley & Leik, 1995; Chalkley et al., 1996; Leik & Chalkley, 1988; Leik & Chalkley, 1989; Leik & Chalkley, 1990; Leik & Chalkley, 1993; Leik & Chalkley, 1996a; Leik & Chalkley, 1996b; Leik & Chalkley, In press; Leik et al., 1991a; Leik et al., 1991b). The researchers did not investigate parental teaching styles or parent participation in children's later schooling, but concentrated on studying overall child and family functioning. This study found that parents who had participated in Head Start had a more positive evaluation of their own children's merits.[43] A quasi-experimental investigation, the Family Impact Study followed 130 families (2 cohorts: 1986-87; 1989-90) that participated in either regular Head Start, special Head Start (a family enrichment model) or a comparison group. The families were studied in both the Head Start participating year for the cohort and then again in 1993. The Family Impact

[43] This study also found other important parent outcomes, but space constraints prevent their discussion here.

Study concluded that the parents' assessment of their children's competence "increased significantly for the two Head Start groups, but no such increase occurred in the control group." (Chalkley & Leik, 1995, unpaginated) Interestingly, the NCJW study also found that Head Start participating parents had more positive perceptions of their children after graduation from Head Start, seeing the Head Start child as more cooperative at home, for example (Parker et al., 1997a, p. 106).

Oyemade, Washington, and Gullo also concentrated their study on parent outcomes other than parental teaching styles or parent participation in children's' later schooling (Oyemade, 1989, p. 9). They were principally interested in the relationship between Head Start and parental self-sufficiency[44]. These researchers found that parent participation in Head Start was associated with increased likelihood of subsequent parent employment (Oyemade, 1989, p. 11), a finding for which the NCJW study also detected a positive trend[45] (Parker et al., 1997a, p. 108). In an *ex post facto* research design, Oyemade, Washington and Gullo studied 205 Head Start-participating parents in four sites. From Head Start records, they obtained data about these parents and their degree and type of parental involvement at Head Start centers during 1978, 1982, and 1984. Assessing parent involvement at these centers, they rated them as either high-, medium-, or low-involvement programs. They also interviewed the parents a few years after the

[44] This is one of the few Head Start studies to significantly focus on fathers as well as mothers.
[45] This result was statistically significant at the $p < .10$ level.

Head Start experience,[46] using a structured survey instrument developed for the study and pilot tested in a previous study in three sites.

They found that there were no significant differences between parents at low- and high- involvement centers on "any of the socio-economic variables at the beginning of the Head Start experience..." (Oyemade, 1989, p. 9). However, the parents at high-involvement centers showed important differences after the Head Start experience than their peers at low-involvement centers. Sixty percent (60%) of the parents from high-involvement centers were working (either full or part-time); at low-involvement centers only 35 percent of the parents who had participated in Head Start were now working. Specifically, with regard to fathers, 86 percent of the fathers from high-involvement centers were employed versus 55 percent from low-involvement centers.

Summary

In these three studies, encompassing almost 450 families, a corroborating pattern of parent progress emerges. Where parental teaching styles and later participation in children's schooling was reported, the findings are similar to those of the larger studies analyzed above. Where other outcomes were investigated, a pattern of parent progress around evaluation of their own children's competence appears. Finally, a pattern of increased parent employment subsequent to Head Start is suggested.

Discussion

This review has identified two sets of findings convergent across two or more longitudinal studies of Head Start families: (1) that parents show more

[46] The investigators did not specify how many years after the Head Start experience the parents were interviewed (Washington & Oyemade-Bailey, 1995, p. 67).

positive overall interaction and more effective teaching-type interaction with their children; and (2) that parents show more involvement with their children's early primary grade education. It is noteworthy that in a time frame spanning more than three decades, two or more of these large longitudinal studies had similar findings about parents whose children were enrolled in traditional Head Start or Head Start demonstrations, in different parts of the country and at different points in Head Start's history.

These patterns of parent outcomes, arising from currently available longitudinal studies with important research design strengths, strongly suggest that both Head Start and family-focused Head Start demonstrations systematically influence parents to both attain and sustain greater engagement with their children's learning. In particular, the findings from the experimental studies analyzed here suggest that, in research and demonstration programs with a very strong family focus, Head Start parents improve skills that are associated with the promotion of early literacy in children (Connors, 1993; Dickinson, 1989; Snow, Barnes, Chandler, Goodman, & Hemphill, 1991; Whitehurst et al., 1994)

It is possible that the parents in these studies who showed this greater engagement would have done so anyway, in the absence of enrollment in Head Start. The limitations of each of these studies underscores that possibility. However, it is of interest that many personal accounts by former and current Head Start parents speak of greater parental engagement in their children's education as one of Head Start's principal effects on parents (Greenberg, 1969/1990; National Head Start Association, 1990; Robinson & Choper, 1979; Sorenson, 1990; Zigler & Muenchow, 1992). In these accounts, parents attribute this change in their lives to the influence of Head Start. In these narratives, Head Start parents often say that they came to Head Start with the goal of effective promotion of their children's educational success, but not the knowledge (and sometimes also not sufficient confidence) to realize that goal, in ways that really did help the children succeed in

both preschool and later schooling. Head Start, these parents attest, helped them develop the means to reach the end – an end that each parent already sought.

Is there a relationship between these possible parent effects and child outcomes? This review did not explore that question. Barnett (1995), in his recent comprehensive review of early childhood care and education research (broader than Head Start) found that the evidence for early care and education's positive effects on children's school outcomes, such as grade retention and special education placement, is "overwhelming."(Barnett, 1995, p. 43). The Carnegie Corporation, in its recent comprehensive report Years of Promise: A Comprehensive Learning Strategy for America's Children notes that there is a research-documented relationship between the types of parent outcomes found in this review and children's educational achievement and school achievement (Carnegie Corporation of New York, 1996, p. 33-44) A recent review of the literature concludes that parent involvement in schooling plays a very important role in children's educational success (Henderson & Berla, 1994).

In this regard, it is noteworthy that the Early Learning and Early Identification Follow-up Study found parent involvement during pre-K/Head Start:

> ...appears to have an enduring positive effect on children's behavior in the classroom. Parent involvement also affects children's grades and performance on standardized achievement tests, with involvement during children's second year in school being especially critical for later school success...with Head Start parents the most likely to be involved early in their children's school careers." (Marcon, 1994, p. 17)

This review of longitudinal studies of Head Start children and families neither indicates nor disproves the possibility that, for Head Start children and families, parent outcomes lead to positive child outcomes. But it does raise, I hope, the question that such might be the case. If so, future, well-designed research could clarify relationships between parent outcomes and long-term school success of children.

Implications for future research

This review points to several conclusions about future Head Start research. First, there needs to be much greater focus on the study of parent outcomes in Head Start research. In a review of 32 years of Head Start longitudinal studies I found only 17 longitudinal studies investigating parent effects. This has strongly persuaded me of the need for more emphasis on parent outcomes in Head Start's longitudinal research.

Others have noted this need, long before I even contemplated this review (Advisory Panel for the Head Start Evaluation Design Project, 1990; Oyemade, 1989; Oyemade, 1985; Phillips & Cabrera, 1996; Smith, 1991; Smith et al., 1990; Smith et al., 1992; Zigler & Muenchow, 1992). Private and public grant makers have begun to support studies with a strong focus on parent effects and the results of some additional longitudinal studies should be forthcoming soon. These include evaluations of the Family Service Center demonstration projects; some of the site-based evaluations of the Head Start Transition Project; and the Yale Family Education and Training Project. However, much more needs to be done.

Second, there needs to be greater emphasis on research design in longitudinal studies of Head Start. Conducting longitudinal research in low-income communities is highly challenging, since residents are often highly mobile in search of work or extended family help; make do without telephones; and work at jobs with non-standard hours. But too many of the studies identified in this review had to be discarded after initial analysis showed that lack of adequate comparison methods or exceptionally high attrition meant that the study's findings could not even be suggestive of an effect on parents. Head Start research needs to emphasize substantive, methodological and cultural competence in design and implementation. Both Congress and the federal Office of Management and Budget

need to permit and provide sufficient resources (including time) for that competence to flourish.

Third, Head Start research needs to emphasize and study a wide, rather than a narrow, range of parent outcome domains. The National Head Start Association has long emphasized this need. Recently, the National Research Council has laid out a comprehensive research agenda designed to advance our knowledge of the interface between Head Start and families, including outcome research (Phillips & Cabrera, 1996). Zigler has long advocated such a comprehensive approach (Zigler & Muenchow, 1992; Zigler & Styfco, 1993). The Minority Scholars have also consistently pointed the way towards a broadening of outcome domains relevant to understanding the breadth of Head Start's actual influence (Oyemade, 1985; Slaughter, 1989; Washington, 1985; Washington & Oyemade, 1985; Washington & Oyemade-Bailey, 1995). Oyemade, Washington and Gullo (1989) have demonstrated that this can be done. So, too, have researchers interested in a deeply two-generation approach to Head Start (Blank, 1997; Kagan et al., 1992; Parker et al., 1997a; Smith et al., 1992). But most of the longitudinal studies to date have focused on parent attributes, skills and behaviors that are associated primarily with children's cognitive development.

Fourth, studies of Head Start's influence on parents should include a substantial focus on fathers and other males important to the families in which Head Start children are nurtured. This will take sensitivity to cultural and economic considerations. Levine and his colleagues have demonstrated that this can be done (Levine, 1993a; Levine, 1993b). It is unfortunate that in over three decades of longitudinal research, fathers have been so frequently ignored.

Finally, the approach to the design of studies of Head Start needs to include both practitioners and parents. A traditional way to accomplish this has been to establish an advisory group to the researchers. But ethnographic and other

forms of qualitative research offer us additional ways to listen to practitioners and parents. Certainly qualitative research should accompany quantitative studies, in order to inform researchers of the context for the outcomes found (or not found). I would also recommend that systematic and sustained qualitative research *precede* impact evaluations, in order for parents and practitioners to inform decisions about the range and type of outcome domains that are worthy of inclusion in the subsequent research.

Implications for Head Start Policy

Should Head Start expansion focus on improving/sustaining parent-child relationships? This review strongly suggests that if Head Start expansion emphasizes support for parents and for the achievement of positive outcomes for parents as well as children, such goals will be realized. However, this is much more likely to happen if Head Start ensures that there are sufficient numbers of skilled and sensitive adults who work extensively and directly with parents in Head Start programs. This could be accomplished through additional staff to Head Start programs, in the social services, mental health, health and/or parent involvement components. This kind of investment is likely to reap rich rewards for children, families, communities and the nation as a whole.

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Table 1.
LONGITUDINAL STUDIES REVIEWED THAT REPORT PARENT DATA

Child and Family Resource Program, (Abt Associates, 1982)

Disadvantaged Children and Their First School Experience, (Educational Testing Service, 1976)

Early Learning and Early Identification, (District of Columbia Public Schools, 1990); Early Learning and Early Identification Follow-Up Study: Transition from the Early to the Later Childhood Grades, 1990-1993, (District of Columbia Public Schools, 1994)

Experimental Variation of Head Start, (Louisville University, 1984)

Experiments in Head Start and Early Education, (Center for Sociological Research, Western Michigan University, 1969)

The Longitudinal Head Start Family Impact Project (Chalkley, M. A. & Leik, R. K., 1995; Leik, R. K.& Chalkley, M.A., 1996)

Head Start Delivery Modes Project, (University of Delaware, 1987); Comparison of Long Range Effects of Particiaption in Project Head Start and Impact of Three Different Delivery Models, (Pennsylvania State University, 1991)

National Evaluation of Head Start Educational Services and Basic Educational Skills Initiative, (NTS Research Corporation, 1980)

Home Start Follow-Up Study: A Study of Long-term Impact of Home Start on Program Participants, (Abt Associates, High/Scope, 1979)

Parent Child Development Center, (Educational Testing Service, 1981)

Parent-Child Centers, (Center for Community Research, 1973)

Parent Involvement in Head Start (National Council of Jewish Women, 1997)

Planned Variation in Head Start and Follow Through, (Bissell, J. S., 1972)

Project Developmental Continuity, (High/Scope, 1971)

Relationship between Head Start Parental Involvement and the Economic and Social Self-sufficiency of Head Start Families, (Oyemade, U., Washington, V. & Gullo, D., 1989)

Rural Child Care Project, (Kentucky Child Welfare Research Association, 1970)

Variations in Service Delivery Models in Region X, (Washington Research Institute, 1992)

ED 027259

Table 2. LONGITUDINAL AND FOLLOW-UP STUDIES ANALYZED IN-DEPTH

Child and Family Resource Program, (Abt Associates, 1982)

Disadvantaged Children and Their First School Experience, (Educational Testing Service, 1976)

Early Learning and Early Identification, (District of Columbia Public Schools, 1990)

National Home Start Evaluation, (High/Scope, 1976)

Parent Child Development Center, (Educational Testing Service, 1981)

Table 3 Selected Findings Regarding Improvements in Parent Skills, Attributes and Behaviors, from Headstart Longitudinal Studies (1965-1995).

Study	Parental Teaching Abilities	Parental Participation in Public School	Characteristics of the Study
1. Early Learning and Early Identification (1987 - present)	N/A	☑	Six yr ongoing quasi-experimental study of children in DCPS[1] pre-K or Head Start, plus matched K-only children Sample selection: Random selection of Pre-K/Head Start children from stratified sample of randomly selected classrooms of 3 different curricular types Sample size: 245 families (67% pre-K/Head Start grads (12% Head Start grads) and 33% K-only) Attrition rate: 17% for substudy of parent involvement Four timepoints for collection of parent involvement data (PS,K, 1st grade & "Year Six") Children aged 4-10 yrs Parent Measures: teachers interviewed for data about 4 types of parental participation for each child's parent

[1] District of Columbia Public School-sponsored pre-kindergarten or Head Start.

N/A = Study did not investigate

☑ = Study investigated and found parent improvement

Table 3 Selected Findings Regarding Improvements in Parent Skills, Attributes and Behaviors, from Headstart Longitudinal Studies (1965-1995).

Study	Parental Teaching Abilities	Parental Participation in Public School	Characteristics of the Study
2..Child and Family Resource Program (1977 -1982)	☑	N/A	Randomized, 3 yr study[2] Initial sample: 409 families Final sample: app. 240 families Attrition rate: 38% (analyses) Four timepoints for parent data Children aged 0-4 yrs Five sites Parent measures: Coded observations, Structured interview

[2] Four years for infant-toddler component. (The study was initially intended as a 5 year study).

N/A = Study did not investigate

☑ = Study investigated and found parent improvement

Table 3 Selected Findings Regarding Improvements in Parent Skills, Attributes and Behaviors, from Headstart Longitudinal Studies (1965-1995).

3. Parent-Child Development Centers (1970-1975; 1976-1980)	☑	N/A	Randomized, multiple-cohort, eight year study Initial sample: unclear Final sample: 550[3] Attrition rate: over 50%[4] Three timepoints (five timepoints for some sites) for parent data[5] Children aged 0-4 yrs Three sites [6] Parent measures: Coded observation; structured interview (3 sites) Inventory of home environment (1 site)

[3]Final sample is defined as the number of parent-child pairs who completed program and data collection: 300 program and 250 control parent-child pairs. (Bridgeman et al, 1981, p.125)

[4] The authors of the final report say that attrition for both program and control groups was "typically over 50%." (Bridgeman et al, 1981, p. 135)

[5] Demographic parent data only collected at entry into sample.

[6] Only data collected after 1972 analyzed.

N/A = Study did not investigate

☑ = Study investigated and found parent improvement

Table 3 Selected Findings Regarding Improvements in Parent Skills, Attributes and Behaviors, from Headstart Longitudinal Studies (1965-1995).

4. Home Start (1972-1975)	☑	N/A	Randomized, 3 yr study Initial sample: 556 families Final sample: 272 families ? Attrition rate: 58% for Home Start program, 56% for control, 57% for Head Start compatison (analyses) Four timepoints (plus a replication study with two timepoints) Children aged 3-5 Six sites 1972-1975 Parent measures: Coded observation, structured interview, inventory of the home environment

N/A = Study did not investigate

☑ = Study investigated and found parent improvement

Table 3 Selected Findings Regarding Improvements in Parent Skills, Attributes and Behaviors, from Headstart Longitudinal Studies (1965-1995).

5. ETS- Head Start Longitudinal Study (1969-1974)	N/A	☑	Six yr non-experimental study of children in 3 communities; Three naturally occurring groups: Head Start, other preschool, no preschool Sample selection: all English-speaking children in all school districts with "substantial proportions" of Head Start-eligible children in 4 communities[7] Initial parent sample: mothers of 1875 children Final parent sample: mothers of 1212 children. Attrition rate: 33% Four sites until 1971; three sites after 1972 Children aged 3 and ½ to 9 and ½ 3 parent data collection timepoints Parent measures: Timepoint 1: Coded observation and structured interview (year 1) Timepoint 2: Coded observation (year 2) Timepoint 3: Structured interview (year 6)

[7] The original design included 4 communities: Lee County, Alabama; Portland, Oregon; Trenton, NJ; and St Louis, MO. After 1972, St Louis was no longer included in the study

N/A = Study did not investigate

☑ = Study investigated and found parent improvement

Table 4

Selected Findings from the Early Learning Identification Study:
Best Predictors of Parent Participation in Child's Preschool and Primary Grade Schooling (n = 178)
(Results of Multiple Regression Analyses)

Year	*Best Predictor of Parent Involvement (N=245)*
Preschool	Head Start Enrollment
Kindergarten	High preschool involvement by parent
1st Grade	Two-Parent Family *
"Year Six"	High Kindergarten involvement by parent

* High preschool parent involvement is the second best predictor of parent participation at first grade

N. B. All results are significant at least at the $p < .05$ level.

Table 5

Selected Findings from the Parent-Child Development Center Evaluation
Summary Maternal Behaviors in Mother-Child Interaction Observations
(At graduation: 36 months)

		Program	*Control*	*t*
Birmingham				
Positive Maternal Interaction (waiting room)	N	86	70	2.47 **
	M	65.59	53.60	
	SD	30.78	29.52	
Effective Teacher (structured teaching)	N	84	67	4.09 **
	M	12.06	10.28	
	SD	2.49	2.86	
New Orleans				
Net Positive Maternal Language (waiting room)	N	42	31	2.77 **
	M	30.26	7.24	
	SD	27.07	39.93	
Sensitivity (waiting room)	N	42	31	2.28 *
	M	6.29	5.19	
	SD	1.62	2.30	
Effective Teacher (structured teaching)	N#	11	13	2.34 *
	M	10.85	9.65	
	SD	1.03	1.40	
Houston				
Positive Maternal Interaction (stuctured teachings)	N	79	82	4.18 **
	M	8.50	7.70	
	SD	1.00	1.38	
Home Total Score (Caldwell Home Inventory)	N	99	108	2.61 **
	M	36.98	33.39	
	SD	4.9	5.9	

* <.05

** <.01

\# Data available only for the cohort entering in 1972

Table 6. Measures for Parent Outcome Patterns

1. Early Learning and Early Identification (1987 - present)

- Annual teacher ratings of parent involvement, defined as parent contact with teacher during the school year, in one or more of four categories:
    - •parent-teacher conference
    - •extended class visit by parent
    - •home visit by teacher
    - •parental help with class activity

2. Child and Family Resource Program (1977-1982)

- Structured parent interview -- Fall 1978, Spring 1979, Spring 1980
- Maternal Attitude Scale -- Fall 1978, Spring 1979
- Coded in-home observation – Spring 1980
    - Toddler and Infant Experiences System (TIES)
    - parallel, adult-focused system developed for study
- Parent as a Teacher Inventory (PAAT)—Fall 1982
- Process/Treatment study interviews with parents and staff -- Fall 1978, Spring 1979, Spring 1980
- Ethnographic study (Fall 1980/Winter 1981)

3. Parent-Child Development Centers (1970-1975; 1976-1980)

- Coded observation of a structured teaching situation and a waiting room situation
- Parent attitude questionnaires (in New Orleans and Birmingham only)
- Inventory of home environment (in Houston only)

    - Houston:
        - Site-developed observation instrument: Maternal Interaction Structured Situation (MISS) --at 12, 24 and 36 months of child age
        - Home Observation for Measurement of the Environment (HOME)—at 12, 24 and 36 months of child age
    - New Orleans
        - Site-developed observation instrument for both waiting room and teaching situation : Mother-Child Interaction scale (MCI)—at 2, 12,24, 36 and 48 months of child age
        - Site-adapted parent attitude questionnaire (adapted from the Stanford Parent Questionnaire) --at 36 months of child age, to one cohort

- Birmingham
  - Site-developed observation instrument for both waiting room and teaching situation --at 24 , 36 and 48 months of child age
  - Site-adapted observation instrument, adapted from the New Orleans Mother-child Interaction scale--at 36 and 48 months of child age
  - Site-developed parent attitude questionnaire (Birmingham Graduation Interview)-- at 36 months of child age

4. **Home Start (1972-1975)**

- Coded observation: 8-Block Sort Task and Mother Behavior Observation Scale –Fall 1973, Spring 1974, Fall 1974 and Spring 1975
- Structured interview: Home Start Parent Interview-- Fall 1973, Spring 1974, Fall 1974 and Spring 1975
- Inventory of the home environment: High/Scope Home Environment Scale-- Fall 1973, Spring 1974, Fall 1974 and Spring 1975

5. **ETS-Head Start Longitudinal Study (1969-1974)**

- Study-developed parent interview: Year 1 and year 6
- Observation of parent-child interaction (not specified) (Year 2)

APPENDIX A

Individuals Asked to Suggest Studies

Helen Blank, Children's Defense Fund

Urie Bronfenbrenner, Cornell University

Raymond Collins, Collins Management Consulting Company

Peter Edelman, former Assistant Secretaryfor Planning and Evaluation, U.S. Department of Health and Human Services, U.S. DHHS

Sarah Greene, Chief Executive Officer, National Head Start Association

Esther Kresh, Administration for Children, Youth and Families, U.S. DHHS

James Levine, The Fatherhood Project, Families and Work Institute

Michael Levine, The Carnegie Corporation of New York

Joan Lombardi, Associate Commissioner, Administration for Children and Families, U.S. DHHS

Michael Lopez, chief, Research and Evaluation Branch, Administration for Children, Youth and Families, U.S. DHHS

Ruth Hubbell McKey, Ellsworth Associates

Shelby Miller, independent consultant, former project officer, Ford Foundation

Gwen Morgan, Work/Family Directions Development

Faith Lamb Parker, Columbia University

Deborah Phillips, National Academy of Science

Douglas Powell, Purdue University

Lisbeth Schorr, Harvard University

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Tom Schultz, Administration for Children, Youth and Families, U.S. DHHS

Ann Segal, office of the Assistant Secretary for Planning and Evaluation, U.S. DHHS

Allen Smith, Administration for Children, Youth and Families, U.S. DHHS

Sheldon White, Harvard University

Edward Zigler, Yale University

APPENDIX B

Methods of identification of studies

To identify longitudinal studies, I:

- located and read three major annotated bibliographies of research studies related to Head Start: (1) A Review of Head Start Research Since 1969 and An Annotated Bibliography (Mann, Harrell and Hurt, 1977), a bibliography of 762 documents; (2) Head Start Research Since 1965, a bibliography of 1,653 documents, produced as part of the Head Start Synthesis Project (McKey et al., 1985); and Head Start Research from 1985 to 1993, a bibliography of over 400 documents, (as well as the updated versions, Head Start Research from 1985 to 1994, a bibliography of 563 documents and Head Start Research from 1985 to 1996, a bibliography of 626 documents) (Ellsworth Associates Inc., 1993; 1994; 1996), all produced as part of an ongoing project entitled "The Coordination and Integration of Head Start Research and Evaluation Activities."

- conducted a search (not limited to Head Start, but focusing broadly on early childhood programs) of the Harvard On-Line Library Information System (HOLLIS), which yielded 151 items as well as on-line searches of the PSYCLIT database (also focused broadly), which yielded 175 items, and the ERIC database (during the time period 1966 to March 1994, also not limited to Head Start), which yielded 932 items[1];

[1] I searched ERIC and PSYCLIT in order to see if there were longitudinal studies in those databases that had not been identified by the Head Start Synthesis Project. However, there were none.

- obtained and read *Selected Head Start References by Minority Scholars* (Anonymous, 1993), a bibliography of 106 documents produced by African-American, Asian and Hispanic scholars;

- scrutinized comprehensive reference lists from either (1) post-1984[2] research reviews of early childhood/early intervention programs or (2) published articles that contain a fairly extensive review of the relevant literature (Collins & Kinney, 1989; McGroder, 1990; Powell, 1989; White, Taylor & Moss, 1992; Zigler & Freedman, 1987); and

- reviewed the proceedings of the first and the second National Head Start research conferences (Administration on Children, Youth and Families, 1993; National Council of Jewish Women Center for the Child, 1991).

[2] A comparison of the items retrieved from the on-line searches with the annotated bibliography for the Head Start synthesis project revealed that there was considerable overlap between the documents identified through 1984 on the computerized databases and the documents included in this bibliography, which did not cover documents produced from 1984 onward. Therefore, I initially made an effort to seek out items produced after 1984, as the compilation of the excellent annotated bibliography of Head Start research post-1984, being prepared by Ellsworth Associates during this period was still a work in progress.